

WHAT IS CLAIMED IS:

1. A display circuit having an emissive element in each of pixels arranged in a matrix, the display circuit comprising:

5       a current-to-voltage converter circuit for sequentially converting a current signal corresponding to a video signal for each pixel in a column direction into a voltage signal;

      a data line onto which the voltage signal output from the current-to-voltage converter circuit is sequentially supplied; and

10       a driver element provided in each pixel for receiving the voltage signal from the data line on a control terminal to control supply of current to the emissive element, wherein

      the current-to-voltage converter circuit sets a voltage on the control terminal of the driver element by supplying a current  
15       corresponding to a video signal for a selected pixel and supplying a corresponding voltage signal to the data line.

2. A display circuit according to Claim 1, wherein

      each pixel has a storage capacitor for accumulating a voltage  
20       signal for the pixel supplied from the data line, and

      a current corresponding to the voltage accumulated in the storage capacitor is supplied to the driver element and light is emitted from the emissive element.

25   3. A display circuit according to Claim 1, wherein

      a plurality of data lines are provided and one current-to-voltage converter circuit is provided corresponding to each data line.

4. A display circuit according to Claim 1, wherein

a plurality of data lines are provided and a plurality of the current-to-voltage converter circuits are provided corresponding to each data line.

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5. A display circuit according to Claim 4, wherein

one current-to-voltage converter circuit is provided on each of two ends of each data line.

10 6. A display circuit according to Claim 1, wherein

the current-to-voltage converter circuit comprises a diode-connected transistor for supplying a current signal corresponding to the video signal, and

a voltage on a control terminal of the diode-connected transistor is supplied to the data line.

7. A display circuit according to Claim 6 wherein

the diode-connected transistor has a source connected to a power supply and a gate and a drain connected to the data line.

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8. A display circuit according to Claim 7, wherein

a selection transistor is placed between the data line and the control terminal of the driver element in each pixel, and

the driver element and the diode-connected transistor form a current mirror structure when the selection transistor is switched on.

9. A display circuit according to Claim 1, wherein

the current-to-voltage converter circuit comprises a

plurality of diode-connected transistors for supplying a current signal corresponding to the video signal, and

a voltage on a control terminal of the plurality of diode-connected transistors is supplied to the data line.

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10. A display circuit according to Claim 9, wherein

the plurality of diode-connected transistors have sources connected to a power supply and gates and drains connected to the data line.

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11. A display circuit according to Claim 10, wherein

a selection transistor is placed between the data line and the control terminal of the driver element in each pixel, and

the driver element and the diode-connected transistors form  
15 a current mirror structure when the selection TFT is switched on.

12. A display circuit according to Claim 1, further comprising:

a converter circuit for receiving a video signal having a voltage indicative of brightness and for converting the received  
20 signal into a current signal corresponding to the video signal.